United Nations COPUOS/T.552

Committee on the Peaceful Uses of Outer Space

Unedited transcript

552nd Meeting
Thursday, 8 June 2006, 10 a.m.
Vienna

Chairman: Mr. G. Brachet (France)

The meeting was called to order at 10.10 a.m.

The CHAIRMAN *(interpretation from French)*: Distinguished representatives, as you will note, I am attempting to get the meeting started pretty much on time and, of course, it means it might be a little bit troublesome for those delegations that are late but I think it is a useful discipline as far as the efficiency of our work is concerned. So I hereby declare open the 552nd session of the Committee on the Peaceful Uses of Outer Space.

This morning, we will continue then with item 5 of the agenda, General Exchange of Views, and then item 6. And then we will go on to item 7.

At the end of this morning's session, Mr. Kaku of Japan will make a technical presentation on the Sentinel Asia project about the creation of a support system for disaster management in the Asia-Pacific region.

You recall that we heard about this project, Sentinel Asia, during Japan's statement yesterday and a number of other countries in the Asia region also referenced it and we are very pleased to be hearing about it more in detail this morning, at the end of the morning.

I would also like to recall to the representatives that the Group of Special Experts on the possibility of creating an international entity for coordinating space services for disaster management is now holding a meeting at this very moment in Room C-0713.

Attendance by non-members of the Committee

Distinguished representatives, I would like to inform the Committee that I have received from Azerbaijan a petition to participate in this session of the Committee as an observer. I would, therefore, suggest that, in keeping with our practice, that we invite the representative of Azerbaijan to participate at the session and, indeed, to take the floor if he or she feels it would be appropriate. This, of course, is without prejudice to other requests of a similar nature and it does not involve any decision on the part of the Committee with regard to the status of speakers. It is customary to authorize it by courtesy and delegations can then take the floor.

As I see no objections, it is so decided.

General exchange of views (agenda item 5)

Distinguished representatives, I now would like to continue then with item 5 of the agenda, General Exchange of Views.

The first speaker on my list is the distinguished representative of South Africa. Mr. Francois Denner of South Africa, you have the floor Sir.

Mr. F. DENNER (South Africa): Thank you Chairperson. Chairperson, my delegation also congratulates you on your election to preside over this forty-ninth session of the United Nations COPUOS. We look forward to fruitful deliberations under your able stewardship and also want to assure you of South Africa's cooperation. Likewise, we also thank your predecessor Dr. Abiodun of Nigeria for the

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commendable manner in which he managed our deliberations in the past two years.

Chairperson, allow me to utilize this opportunity to pledge South Africa's solidarity with the people of Indonesia who are experiencing hardship and suffering as a result of the earthquake in Java.

Chairperson, South Africa is committed to playing a constructive role in advancing international cooperation in the peaceful uses of outer space in support of achieving the Millennium Development Goals. In this connection, the South African Minister of Trade and Industry, together with other Ministers, is developing a National Space Policy framework. This in an intense process that entails an analysis of the international legal framework, as well as a review of South Africa's space legislation in the longer term. In the interim, the current legal framework pertinent to space activities is the Space Affairs Act of 1993 that has a Council for Space Affairs to oversee the implementation of this new space policy and enforce regulatory compliance in the South African space arena. Although under re-examination, the Space Affairs Act of 1993 recognizes the need for outer space to be used for peaceful purposes, as well as the need to meet all international commitments and responsibilities entered into by the South African Government.

In light of the above major recent development South, Africa is giving serious consideration to the ratification of the Convention on Registration of Objects Launched into Outer Space, and the Convention on International Liability for Damage Caused by Space Objects.

Other than activities undertaken at the norm setting level, I would also like to share with this august gathering, some activities that my Government intends to embark on in its efforts to translate into practical actions South Africa's commitment to the effective utilization of outer space for peaceful purposes.

In November 2006, South Africa will host a Training Course on Satellite-Aided Search and Rescue in support of the United Nations Programme on Space Applications and for the benefit of the African region.

In support of the proclamation of 2007 as the International Heliophysical Year, South Africa will host a workshop to coordinate African participation in events associated with this initiative. We invite interested countries to participate in this workshop to be held in Cape Town in late October or early November 2006.

South Africa is considering hosting the next follow-up Conference to the first African Space Leadership Conference that was held in Nigeria in 2005.

As a contribution to the Global Earth Observation System of Systems, South Africa is developing a strategy that should lead to a more efficient and coordinated utilization of Earth observation data at all levels.

With regard to ongoing national activities, discussions are continuing with Algeria, Kenya and Nigeria, towards the possible launch and operation of a low-Earth-orbiting satellite constellation. This project will provide data to address the most crucial of Africa's development objects: food security, infrastructure development, and the improved management of land usage, water resources, and disasters. This gesture constitutes South Africa's contribution to the constellation of micro-satellite supporting hyper-spectral and multi-spectral camera payloads. In addition to this, and in line with the development priorities of the New Partnership for Africa's Development, NEPAD, South Africa already provides free access to LANDSAT data to the entire Southern African Development Community. This initiative is intended to assist the process facilitating the implementation of national and regional policies in agriculture, forestry, natural resource and environment monitoring, land use mapping, as well as geological and hydrological applications.

All our ongoing and envisaged activities are firmly anchored on my country's commitment to continue supporting the use of space science and technology in order to place developing countries on a path of sustainable growth and development. We are, therefore, committed to supporting, through our active participation, the work of this Committee towards greater effective utilization of space for the benefit of all humankind and look forward to participating in the work of this forty-ninth session of this Committee.

Chairperson, South Africa commends and reaffirms the relevance of the United Nations Committee on the Peaceful Uses of Outer Space and the United Nations Office for Outer Space Affairs. We have noted with appreciation the good work undertaken towards the implementation of the recommendations of UNISPACE III for more effective utilization of outer space for peaceful purposes. Likewise, we are following with great attention ongoing work on the issue of space-based disaster management, in particular the work of the Ad Hoc Expert Group as reported in the Scientific and

Technical Subcommittee. We believe that the proposed establishment of an international entity to coordinate space-based services for use in disaster management will complement the International Charter on "Space and Major Disasters" and lead to improved operational capacity to manage and mitigate disasters globally. Such an entity could particularly benefit developing countries that lack the operational capacity to utilize space data for disaster management. However, this would require that specific and practical mechanisms be put in place to ensure that indeed the developing countries do benefit from the establishment of such an entity.

In conclusion, Chairperson, I would like to reiterate my delegation's long-standing principled position that space should continue to be used for peaceful purposes for the benefit of all humankind. South Africa strongly believes that the introduction of weapons into outer space would undermine this sacrosanct undertaking, as well as disarmament and non-proliferation efforts.

Thank you Chairperson.

The CHAIRMAN *(interpretation from French)*: Thank you to Mr. Denner, the distinguished representative of South Africa. Thank you for the information that was conveyed with regard to the activities and positions of your country with regard to space and its applications. In the course of my career, I had the pleasure of working on a number of occasions with South Africa and with your colleagues from the CSIR, and I am very pleased to see that South Africa continues to be a key player in the international scenario with regard to space applications.

We will now move on to the second speaker on the list for item 5 of the agenda. It is Portugal. Mr. Duarte Santos will now have the floor please.

Mr. F. DUARTE SANTOS (Portugal) *(interpretation from French)*: Thank you Mr. Chairman.

(Continued in English) On behalf of the Portuguese delegation, I wish to express my congratulations to you, Mr. Chairman, on your election as Chairman of this Committee and also to the other members of the Bureau. Your competence and experience in the field of space will be very important to fulfil the objectives of COPUOS and I would also like to reiterate my Government's full commitment and cooperation in achieving them.

Also I would like to thank the previous Bureau and, in particular, its Chairman, Dr. Adigun Abiodun, for the excellent work in advancing the objectives of COPUOS.

Let me also extend our recognition for the excellent professional work performed by the Office for Outer Space Affairs and, in particular, by Mr. Sergio Camacho in support of the activities of our Committee.

Mr. Chairman, Portugal is strongly committed to the peaceful uses of outer space and in particular to the development of science and technology in the field of space. We believe that the applications of space science and technology is very important to address the growing concerns about world global and regional problems and to obtain a more equitable and sustainable social and economic development.

Portugal gives special importance to the coordination within the United Nations system and inter-agency cooperation. It, therefore, welcome the report of the Secretary-General on the directions and anticipated results for the period 2006-2007 regarding this coordination. In particular, we think it is essential that space applications are consistently used to achieve the goals and objectives of recent global conferences, convention and protocols of the United Nations system, such as the 2002 World Summit on Sustainable Development, the United Nations Millennium Declaration, the World Summit on the Information Society, the United Nations Framework Convention on Climate Change and the Kyoto Protocol.

The Portuguese delegation wishes to express it satisfaction for the excellent work done under this Committee no the ways and means of implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space. We fully support the creation of an international entity to provide for coordination and the means of realistically optimizing the effectiveness of space-based services for use in disaster management. And, therefore, we all can report(?) of the Ad Hoc Working Group. This is particularly important in view of the recently observed trend of more frequent extreme weather and climate events, extreme precipitation events, tropical storms leading to floods and landslides and also droughts, such as the one that occurred in Southern Spain and Portugal and Morocco, in 2004-2005. Furthermore, this tendency is likely to become stronger in the future due to anthropogenic climate change.

We also welcome the plan to establish a closer link between the work relating to the implementation of the recommendations of UNISPACE III and the work being carried out by the Commission on Sustainable Development, particularly in view of the need to have a more equitable and sustainable world.

As regards space-related activities in Portugal during 2005, allow me to refer that several scientific conferences and workshops have been organized last year in my country on seismology and tsunamis to mark the two hundred and fiftieth anniversary of the violent earthquake and tsunami that struck the south-west coast of Portugal and in particular Lisbon in 1755. This was one of the most powerful and destructive earthquakes and tsunamis recorded in history.

Following the recent approval of the National Research and Development Space Strategy, which involves the participation of industry, scientific and technological research institutions and universities, Portugal is now actively engaged in various space activities and, in particular, under the European Space Agency programmes specially on Earth observation.

Mr. Chairman, I am happy to report that the Portuguese Government and ESA have signed an Agreement for the setting up and use of a tracking station in the island of Santa Maria in the Azores archipelago in the North Atlantic.

Particular attention was given in 2005 to the continuing development of telecommunications technologies, navigational systems, onboard data systems, space systems software, Earth observation and environmental monitoring systems and tele-medicine technologies. Special efforts were made to use space technologies to prevent and combat forest fires.

Another active sector is the development of instrumentation for astro-psychics, geo-physics and oceanography. And as an example, I would like to mention the delivery in 2005 of an infrared camera for the Very Large Telescope of the European Satellite Observatory in Chile.

As regards matters concerning the Legal Subcommittee of COPUOS, my delegation wishes to express its support for the drafting of a comprehensive convention on international space law.

Thank you Mr. Chairman and distinguished delegates for your attention.

The CHAIRMAN *(interpretation from French)*: Thank you to Mr. Duarte Santos for his statement and for the information that you conveyed about space activities in Portugal. I had the pleasure when I was at LSR(?) to vote with ESA Portugal into the club of countries that are members of ESA and I remember the excellent ties we had with your Ambassador who represented your country at ESA. So thank you very much for that statement.

We will now move on, still on item 5 of the agenda, to Hungary. I think it is my first Vice-Chair who has now gone back to take his place as representative of Hungary to make this statement. You have the floor Sir.

Mr. E. BOTH (Hungary): Thank you very much Mr. Chairman. Mr. Chairman, let me express my warmest congratulations to you as being elected the Chairman of this Committee. I am convinced that under your chairmanship this Committee will reach a significant progress in its work.

Mr. Chairman, distinguished delegates, first I want to convey our sympathy and condolences to the delegation and people of Indonesia, where very recently thousands of people lost their lives due to the devastating earthquakes.

Let me now briefly inform the Committee on some important features of our country's space programme.

Hungary highly appreciates that as a follow-up of the UNISPACE III Conference held in Vienna in July 1999, the European and French space agencies, ESA and CNES, initiated the International Charter "Space and Major Disasters", to which several more agencies joined since. The Disasters Charter provides quick, remote sensing-based help to countries in case of emergency. Earlier this year, the Disasters Charter was activated for the benefit of some Central European countries, including Hungary. Heavy rainfall and snowmelt at the end of March and in April 2006 caused the highest peak of overflow in the last century of the river Tisza, a major tributary of the Danube and the Danube itself. The cities of Prague, Budapest and Belgrade were threatened, by mid-April, thousands had been evacuated. The activation of the Disasters Charters had been requested by the European Commission Civil Protection Monitoring and Information Centre. The project management had been done by the German Space Agency, DLR. On behalf of the Hungarian authorities, my delegation expresses thanks for the help provided by the Disasters Charter.

It is my privilege to announce that Hungary has just recently joined the GEO/GEOSS International

Cooperation, as its sixty-fourth member. This activity is coordinated by the Ministry of Informatics and Communications.

As a consequence of our EU membership since 2004, my country takes part in the activity of the European Space Council. Of the space-related programmes of the European Union, the GMES is the most important for us, since for the time being, this promises the most direct results for the benefit of the people.

Our highest priority in international cooperation is that with the European Space Agency. Hungary is a European Cooperating State of the Agency. The implementation of the PECS Agreement goes smoothly, yielding several successes in different fields of space activity. However, for us the most important step forward is the fact that the Hungarian Minister of Informatics and Communications received an official authorization by the Hungarian Government to officially notify ESA that Hungary would like to access the ESA Convention. Hungary's negotiations on the accession to the ESA Convention hopefully will begin later this year.

We highly appreciate that ESA invited the representatives of the new member States of the European Union as observers to the Agency's Ministerial-Level Council Meeting.

My delegation expresses our congratulations to the delegation of Romania on the occasion that the country last February joined the European Space Agency's PECS Programme. We expect a continuing successful cooperation with ESA by the three member States of the PECS Programme, namely the Czech Republic, Romania and Hungary. We hope that in order to strengthen this cooperation, ESA will soon establish the PECS Committee.

As a follow-up of our close cooperation with ESA, Hungarian students have the opportunity to participate in ESA's educational programmes. This very important aspect of our ESA relation will be mentioned in details by my delegation in a separate statement under the agenda item, Space and Society.

It is also our great privilege and honour that a speaker from Hungary had also been invited to make a presentation on the Symposium "Space and Forests" next Monday, during this Committee meeting.

Our scientists and engineers successfully participated in a few international space missions. Last February, two pieces of three axis cosmic particle detectors, designed and produced in the Atomic Energy Research Institute of the Hungarian Academy of Sciences, were brought to the International Space Station. The several months long series of measurements is a part of an ambitious international project, aiming the investigation of the neutron radiation field within the Station.

The same Hungarian institute also took part in the Photon-M satellite mission. They produced a few of the instruments of the Biopan-5 experiment facility package. The experiment was to measure radiation does, comprising a set of five different detection methods. Special attention was paid to measuring radiation doses, comprising a set of five different detection methods. Special attention was paid to measuring radiation doses behind extremely thin levels of shielding.

In the meantime, the possibilities of our future participation in different international scientific space missions are step by step outlined. Our scientists continue their participation in ESA's Rosetta mission. In the future, we will also participate in the Beppi Colombo mission to planet Mercury, both in ESA and Japan cooperation.

Thank you for your attention. Thank you Mr. Chairman.

The CHAIRMAN *(interpretation from French)*: Thank you very much Mr. Both for your presentation on behalf of Hungary, telling us about Hungary's activities in the area of space and space applications. I am very pleased to note, Sir, that Hungary has decided to join the European Space Agency and is currently negotiating its accession as of the second half of this year and I would like to congratulate you upon that decision. It was a personal pleasure for me to spend several stays in Budapest and I noticed Hungary is becoming ever-more active in the area of space activities. Might I congratulate you upon that.

I now turn my attention to the next speaker on my list, that is Ukraine, and I give the floor to Ms. Nataliya Malysheva.

Ms. N. MALYSHEVA (Ukraine) *(interpretation from Russian)*: Thank you very much Mr. Chairman. Mr. Chairman, I should like to start, on behalf of my delegation, by congratulating you on your election to the chairmanship of this Committee for the period 2006-2007. We are certain that under your deft leadership, the Committee will be effective, dynamic

and fruitful in its work with the aim of the use of space for peaceful ends.

I would also like to thank your predecessor, Dr. Abiodun, under whose leadership the Committee worked successfully for two years.

My delegation would also like to thank the Office for Outer Space Affairs under the leadership of Mr. Sergio Camacho-Lara. His and the Office's qualified work, not only during these sessions but also in the inter-sessional periods, has been very useful.

Our delegation would also like to convey its condolences to the Indonesian delegation, having so recently been struck by an appalling natural disaster, namely the earthquake in Java. At the same time, we would like to express our solidarity with all victims of natural disasters, whether these be earthquakes, floods, tsunamis or hurricanes, which have struck our planet in the last year.

All these natural disasters bring pain and anguish to the victims but they also face us with the question as to whether our priorities are correct and whether we are fully using the international community's capabilities and potential. That is the huge resource that we have in terms of scientific space science and technology which is in a position to help us not only deal with the consequences of natural disasters but also put us in a position to forecast them and, therefore, puts us into position to have early warning of such disasters.

Mr. Chairman, Ukraine's space activities over the last year have been focused on the implementation of the main areas of our Third(?) National Space Programme for the period 2003-2007, as well as the implementation of our commitments under international programmes and projects. We have also been _____ (?) with the restructuring and commercialization of our national space sector and we have done this by the introduction of the latest space technologies and by enhancing the contribution of the private initiative and competition and also by giving rise to broad cooperation with international financial, scientific, technical and other organizations.

In the period 2005-2006, six Ukrainian production rocket launches took place and these were successfully placed in orbit in the interests of users from various different countries. Ukraine is seeking to broaden cooperation with interested States and international organizations.

The main efforts of the European aspects of the Ukraine's space policy are currently focused on the formation of the first European space programme and as well as on the participation of Ukrainian companies in a number of European programmes. I am thinking in particular of AURORA, GALILEO, GMS and FLPP, as well as others. Ukraine is part of the European Rocket Project, VEGA(?), and is involved in a whole series of other joint scientific and technical projects. And we are delighted to be in a position to say that we are actively preparing for the conclusion of an Agreement between the Ukrainian Government and the European Space Agency, dealing with issues of cooperation when it comes to the use of space for peaceful purposes.

In the period 2005-2006, Ukraine has continued its active cooperation in the area of space with the United States of America. At the moment, the Ukrainian and United States Governments are preparing a framework agreement on cooperation in the exploration and use of space for peaceful purposes.

In 2004, the United States announced a new space initiative which is designed to have a significant impact on deepening cooperation between our countries and to increase the scope of these programmes.

We are also continuing our cooperation with the Russian Federation, with the Republic of Brazil, with China and with European Union countries. In recent times, we have enhanced our cooperation with Turkey, Indonesia, Nigeria, Kazakhstan and other States.

In addition, a set of intergovernmental bilateral agreements in the space area are being prepared for signature.

Mr. Chairman, Ukraine, as a member of the United Nations Organization and as one of the leading space powers, has always welcomed the Committee's efforts to ensure a broad discussion of the most important matters of space activities. We consider that all matters on the agenda of the forty-ninth session of the Committee are relevant and deserve our attention.

A vital issue for discussion in this Committee continues to be the ways and means of maintaining outer space for peaceful purposes. Our delegation sees the task of the Committee here as being the drafting or the development of effective mechanisms, chiefly legal mechanisms, to make sure that we prevent the militarization of space.

Ukraine welcomes progress achieved by the Committee and its Subcommittees in examining the matter of the implementation of the UNISPACE III recommendations and notes the need for further monitoring of this issue.

My delegation is satisfied to note the increasing attention being paid by the Committee to the examination of the set of issues which broadly fall under the heading of sustainable development. The concept of sustainable development was, just a little while ago, felt to be the prerogative of purely environmental fora such as the Second United Nations Summit on the Environment and Sustainable Development in Rio de Janeiro in 1992 and the Johannesburg Summit in 2002.

This concept is gradually breaking out of a purely environmental framework and this is entirely justified and, in keeping with doctrine, because in keeping with doctrine, sustainable development has three main components, namely, the economic, the social and the environmental. One might even say that in terms of the United Nations current and future plans, there is no other issue which is so much in need of such inter-institutional integration and such coordination of action as the question of sustainable development. And space science and technology can play a vital role in ensuring sustainable development. And, therefore, we welcome the examination under our agenda of the current session of all issues which deal with sustainable development and we also welcome the conduct of a Symposium on Space Exploration and Forests, to be held on 12 of this month.

Mr. Chairman, Ukraine is a participant of four United Nations space treaties and has always championed the unwavering observation of the international legal regime in the area of space activities. At the same time, we note that the set of United Nations space treaties, which goes back over 40 years, is not fully capable of meeting current realities and new problems which are arising in the area of space activities. Therefore, Ukraine champions the broad discussion of ways and prospects for the further development of space law. The point being is that there is no other area of international law which is felt to be fixed, once and for all, and whose instruments are considered to have been determined once and for all and capable of acting over an unlimited period of time. The idea of codifying international space law via the drafting and adoption of a comprehensive space law convention, which is something that has been consistently defended by a number of countries, including Ukraine, this idea of codification has not yet been the object of consensus in the Legal Subcommittee. Now, consensus is an important means of resolving matters in our Committee and our Subcommittees. We are, however, all aware of the fact that consensus here is the reason for a certain stagnation which meant that, over a number of years now, decisions have not been taken on some of the most important aspects of space activities.

Our delegation in the Legal Subcommittee, with the support of the Russian/Kazakh delegations, as well as the support of a number of other delegations, has suggested that there should be a questionnaire on the prospects of the development of space law, the idea being to compile information on how States are positioned with regards to the idea of the prospect of developing space law, of the development of space law.

The idea of a discussion of this questionnaire was supported by the Legal Subcommittee at its forty-fourth session. However, we still have not seen a publication of such a questionnaire.

Mr. Chairman, the development of international and national space law in the last few years in Ukraine has been the object of a great deal of attention. For eight years now, since 1998, the International Centre for Space Law has been up and running in Kiev successfully. This is a scientific organization whose remit includes a number of aspects of the application and development of space law, as well as the training of staff in this area.

We are delighted that this year the Office for Outer Space Affairs has demonstrated a great confidence in our Centre and in Ukraine as a whole in announcing that Ukraine will be the host of the next United Nations Seminar on Space Law. This Seminar, for member States of the United Nations Economic Commission for Europe, will take from 4 to 9 November of this year under the title “Status, Application and Progressive Development of International and National Space Law”. At this Seminar, the most relevant issues of space law will be discussed, as well as matters of education in this area. The Seminar will very largely take place in the Ukrainian capital, Kiev, in addition to which we plan to hold a one-day session in Niev_____(?), which is the city of the home of the Soviet and Ukrainian space industry. We would like to invite all interested delegations to take part in the work of this Seminar.

Thank you very much Mr. Chairman.

The CHAIRMAN *(interpretation from French)*: I thank Ms. Nataliya Malysheva for her

statement. Thank you very much Madam for the very thorough information which you have made available to the Committee today on Ukraine's space activities as well as recalling Ukraine's position with regards to space law. And I have also learned that there is going to be a seminar in Kiev this year and I am delighted to hear that news.

We now turn our attention to the statement to be made by Cuba by Mr. Luis Prado Garcia. You have the floor Sir.

Mr. L. PRADO GARCIA (Cuba) *(interpretation from Spanish)*: Thank you Mr. Chairman. May I, at the outset, congratulate you on behalf of my delegation on your election as Chairman of this session of the Committee on the Peaceful Uses of Outer Space.

We would also like to extend those congratulations to the Vice-Chairs alongside you and we wish you every success in your work and we would like to reiterate my delegation's availability and preparedness to contribute to the success of this meeting in achieving the hopeful results.

And likewise, my delegation would like to express its acknowledgement of the work done in the last year by the members of the Bureau that have worked last year and by the Office for Outer Space Affairs as well as the efforts undertaken in organizing this session.

We would like to join many delegations who have thus far expressed condolences to the people and Government of Indonesia for the victims caused by the recent earthquake that took place and we would like to, once again, underscore the availability of my country to contribute, modestly perhaps, to helping the thousands of people impacted it. In my sister nation, we have some 135 Cuban doctors who have the necessary equipment to help.

Mr. Chairman, distinguished delegates, for Cuba, the peaceful uses of outer space is a source of hope for the development of mankind. The many advances in this area, in vital areas such as remote sensing, telecommunications and tele-medicine, to mention just a few, are just a pale reflection of the enormous benefits that space technology can bring to all of us in a not so distant future.

Unfortunately, that very promising panorama has a shadow cast over it by the tendency to increasingly militarize space and especially by the attempts by some powers to bring this scenario into an arms race and conflicts which are brought to our planet through that. We trust that rationality, multilateralism will triumph over unilateralism, hegemony and unbridled weapons development and that we will be able to have guarantees that space will be free of all types of weapons and that the potential of space technology will be used for the benefit of mankind.

In this regard, COPUOS must play a vital role, both in terms of what it can and should contribute in terms of promoting the peaceful uses of outer space and in terms of the contribution that it makes and that it should continue to make for the consolidation and enhancement of the ethical principles and the legal principles which would guarantee absolutely peaceful use, fair and non-discriminatory use of all space applications.

In this spirit, Cuba participates in this Committee and is making modest progress in its own path of the peaceful uses of outer space, coming out of many difficulties which are inherent in the condition of a small country which is a small island and developing, as well as those problems which stem from the unfair economic blockade, financial and commercial blockade, which is being subjected to us due to the most powerful country in the world.

Mr. Chairman, since the last session of this Committee, the geographical area where Cuba is located has seen one of the most active periods of hurricanes in history. In this context, the use of satellite images of high resolution was a very useful tool for meteorological predictions carried out by the Institute of Meteorology of the Ministry of Science, Technology and Environment in Cuba.

These accurate predictions, along with the measures and organization of preventative evacuation organized by Civil Defence, made it possible to safeguard our population and many of our economic objectives during the passage of hurricanes and tropical storms, some of which were very intense, such as Katrina.

Cuba actively participates in the processes of integration and cooperation for predicting and managing natural disasters and, thus, we agree that this is a vital issue and should continue to be discussed in all its aspects in this Committee.

Likewise, remote sensing of the Earth is something that is being used in many areas, very different areas, such as science, agriculture and industry, amongst others, for the development of our country sustainably. In this regard, in 2005, the map of

vegetation coverage of a scale 1:50,000 was created to map out the whole area of the Almendares Vento Basin in the province of Havana. To map the vegetation, we used air photographs and LANDSAT images as well as field verifications and observations.

We also used very broadly satellite images for the detection and monitoring of fires in any kind of vegetation, as well as for the diagnosis and prognosis of fire risk in the short and medium term. To support this, we have developed an automated system using work in cooperation between two institutions, the Meteorological Institute of Cuba and the National Space Research of Brazil.

This system was designed to detect fires based on satellite images from NOAA, GOES and TERRA/AQUA, which then guarantees space coverage of the entire country which high frequency. The information is then generated and sent to users or end-users in different types of warnings or early warning systems in real-time, 15 minutes after the passage of the satellite.

Moreover, analysis of the impact of Sahara dust clouds has also taken place to look at its impact on rain, storm genesis and cycles, the health of the region of the Atlantic, the Caribbean and the Gulf of Mexico and based on satellite images from the NOAA and GOES series, which are extremely important for understanding the impact of air pollution on weather and climate processes in this whole area.

We are also continuing to use satellite images which are of high resolution and which are used by the Meteorological Institute Weather Station for the detection of and monitoring of the evolution of ocean currents and oil spills at sea.

In the area of space science, the Institute of Geo-Physics and Astronomy of the Ministry of Science, Technology and Environment of Cuba have continued monitoring the Sun, the ionosphere and the geo-magnetic field of the country and has continued to send the data obtained to centres around the world.

Mr. Chairman, in the last four decades, human capital has been developed as a major priority in Cuba and clearly this is one of our greatest sources of wealth and thus all our actions are geared to continuing developing and strengthening it. It is a high priority for the Cuban Government.

In this context, distance education is of particular importance. For instance, in 2005, the course "Elements of Astronomy" was broadly and well received by the public.

Moreover, the World Space Week was held in Cuba with a number of different activities. These activities were geared more particularly to children and young people with special emphasis on the use of space technology in meteorology.

Mr. Chairman, my delegation looks forward to the upcoming Fifth Space Conference of the Americas and is preparing to actively participate in it, with the view to promoting effective cooperation amongst countries in the region. In this regard, the Cuban delegation participated in the Preparatory Meeting which was held in Santiago, Chile, and this was a significant step in terms of guaranteeing the Conference's success.

Finally, I am pleased to report that my country is developing a programme of activities to celebrate the International Heliophysical Year in 2007. We attach great importance to this due to its possible contribution to the peaceful uses of outer space.

Thank you Sir.

The CHAIRMAN *(interpretation from French)*: Thank you Mr. Garcia for that statement. It provided us with a lot of very useful information with regard to the peaceful uses of outer space in your country where the meteorological satellites or other satellites, all of which are very important, of course, for a country which is located in a hurricane belt.

We will now move on to Austria's statement. I think it is Mr. Böck that will be speaking. You have the floor Sir.

Mr. H. BÖCK (Austria) *(interpretation from French)*: Thank you Mr. Chairman. May I, at the outset, express my delegation's satisfaction at seeing you chair this forty-ninth session of this COPUOS. We are convinced that your know-how and broad knowledge and experience in space affairs will be very significant in terms of helping us make headway in the area of international cooperation during this session. My delegation would like to offer its unconditional support to reaching those goals.

(Continued in English) We would also like to express our appreciation to Dr. Abiodun for his efficient leadership over the last two years. We look forward to benefiting from his experience in his support to the current Bureaux of the Committee and its Subcommittees.

Let me also convey my congratulations on the elections of the other able members of the Bureaux.

I would also like to thank the Director of the Office for Outer Space Affairs, Dr. Sergio Camacho-Lara and his able team for their encompassing activities, work and preparation for the sessions of our Committees.

As other speakers before me, Austria would like to express her sincere condolences to the Government and to the people of Indonesia, where thousands have lost their lives, their livelihoods and their homes by the recent earthquake. We do hope that human suffering can be alleviated by effective national and international aid.

Mr. Chairman, the United Nations have consistently ranked high on the list of Austrian foreign policy priorities. We have tried to contribute to this encompassing international organization to the best of our abilities in the past and we shall continue to do so, out of the conviction that the United Nations is the global forum to foster peaceful co-existence and prosperity for all. We want this Organization to remain relevant and capable to meet today's challenges. For this reason, we have, together with our European Union partners, continuously supported efforts towards its modernization and reform.

The same line of reasoning guides our policy on outer space affairs. Austria is proud to have played a significant role in the Committee on the Peaceful Uses of Outer Space and we have devoted a considerable amount of resources in support of the Committee towards the fulfilment of its mandate. We want COPUOS to remain an important forum for the international community. We, therefore, agree with Karl Doetsch in that the Committee must look forward and stay abreast of current developments. We are open as to how we can best ensure this. In this context, I would like to mention that Austria noted with interest the Canadian proposal of developing international standards of conduct for defined acceptable behaviour in space and we look forward to hearing more about it.

Mr. Chairman, as Mr. Doetsch pointed out, it is especially important that space goals be linked to international development goals and that our work is not out of sync with the deliberations in other United Nations fora. We, therefore, welcome the various efforts towards an increased exchange with debates going on elsewhere. We are pleased to hear that the inter-agency meetings taking place in January are considered successful and enjoy increasing attendance.

We also commend the Office for Outer Space Affairs for organizing a panel in the margins of the General Assembly session to bring space-related issues to the attention of the Fourth Committee and others.

Finally, my delegation welcomes the intensified exchange with the Commission for Sustainable Development. It is an important factor in raising the awareness of what space technology has to offer for international development.

In this context, Austria is glad to be able to contribute to these objectives by continuing to support the symposia we have held in Graz, Styria, over the last 13 years. This year's topic will deal with "Space Tools for Monitoring Air Pollution and Energy Use for Sustainable Development". The goal of the current series of three symposia, to be held from 2006 to 2008, is to promote the use of space technology to support some of the actions called for in the Johannesburg World Summit on Sustainable Development, WSSD. This year's Symposium will address issues related to the development, funding and implementation of projects using space systems for monitoring the atmosphere, energy production and consumption. Questions such as the use of space technologies to combat air pollution, how to develop alternative sources of energy, locate possible sources of energy and monitor its consumption, with a view to reaching a balance between energy consumption, necessary for development, and air pollution will be discussed. The Symposium is scheduled from 12 to 15 September of this year.

Mr. Chairman, throughout the past decades, Austria has given great importance to the use of space technology for solutions to problems on Earth. Thus, we have attached keen interest to the question of how space technology can be applied in disaster management. For this reason, we welcome the valuable input supplied by the experts of the Working Group in preparing the Study that was presented in February of this year. We attach importance to the Expert's conclusion that there are gaps in the existing systems and initiatives which must be urgently addressed, and we agree that this can best be done under the leadership of the Office for Outer Space Affairs.

We are pleased to inform the Committee that the Austrian Government would support the establishment of such an entity, should it be entirely based in Vienna, with a contribution in cash of 150,000 Euros, for initial investments as well as training, education and other costs. In addition, we would be

willing to fund an expert for DMISCO for the duration of one year and could cover the costs of a Junior Professional Office for the duration of one year with the possibility of renewal. Furthermore, together with the United Nations Office at Vienna, we would be glad to offer the necessary office space in the VIC rent free. We, therefore, hope that we can help to bring into existence such a space-related United Nations entity, attached to the Office for Outer Space Affairs, that can be effectively operative in such a highly topical area such as disaster management.

Mr. Chairman, a few years ago we urged to put the issue of water on the agenda of this Committee. As satellite data on forests constitute an important input to understanding the water cycle, we appreciate the opportunity to delve further into the theme of space and forests by supporting the organization of a symposium next Monday afternoon and organizing a poster show on this topic.

Mr. Chairman, we are also pleased to inform delegations that the new ESA School Atlas, based on Earth observation data, has been completed and the producer has offered to present the heads of each national delegation with one copy. This Atlas constitutes a fine example of how future potential users can be familiarized with space technology as well as sensitized to environmental issues at an early stage in their education.

Before I conclude, Mr. Chairman, let me briefly comment on a few issues the Director of the Office for Outer Space Affairs has also shared with us at the beginning of this meeting. We take note of the fact that only one third of the total cost of the activities of the Space Applications Programme is covered by the regular budget and we do hope that the spending cap can be lifted so that activities can take place as planned.

With regard to the administrative instruction to limit the length of reports, my delegation would seek an open and constructive approach to achieve this goal.

We would also like to congratulate the Office for Outer Space Affairs on the new website. Its designers have succeeded in presenting it in a user-friendly fashion, including an easy way to access documents in preparation of meetings.

As the host country, we would also like to thank all contributors to the Space Exhibit. It has become one of the major attractions of guided tours of the Vienna United Nations Headquarters.

Finally, Mr. Chairman, I have the pleasure to convey an invitation by the Secretary-General of the Austrian Foreign Ministry, Dr. Köller(?), who would like to invite heads of delegations to a Viennese Heurigen Evening that is planned for Tuesday, 13 June in the evening. Please check the invitation that will be distributed for further details.

We look forward to a fruitful exchange and measurable progress in our work.

Thank you Mr. Chairman.

The CHAIRMAN *(interpretation from French)*: Thank you Mr. Böck for your presentation. A very interesting statement and indication of how involved in space activities your country is. Everyone knows that Austria has played a key role in establishing and conducting the Space Committee, thanks to Ambassador Lewisky(?), and it is a pleasure and honour that we have him here today and I would like to thank him as well in passing. I would also like to thank you for your remarks with regard to the budgetary issues in the Committee and the Office. I think everyone needs to be aware of the budgetary issues, aware of Mr. Camacho and his team's challenges in this regard. And I would also like to thank you for the invitation for the heads of delegations next Tuesday night for the Heurige.

The next speaker on my list will be France. So I now give the floor to the Ambassador. You have the floor Sir.

Mr. F.-X. DENIAU (France) *(interpretation from French)*: Thank you Mr. Chairman. First, on behalf of the French delegation, I would like to express our satisfaction at seeing you chair this Committee. And, if I may, I would also add my own personal satisfaction and my very sincere wishes for the success of your chairmanship, of which I have no doubt. You know that France attaches great importance to the role of COPUOS. Indeed, we are convinced that your great experience in the area of space issues will allow the Committee and Subcommittees to conduct their work in a particularly constructive manner at a time when space activities are undergoing deep-seated changes. I am sure that under your very competent authority, this Committee will be able to get the important motivation it needs in order to move forward with our goals in the future.

My delegation would also like to congratulate the new Chairs of the Scientific and Technical Subcommittee, Dr. Suresh of India, for the forty-third session, and Dr. Othman of Malaysia for the forty-

fourth session. And we would like to congratulate Ambassador González for his chairmanship on the Legal Subcommittee.

And finally, we would like to applaud the arrival of Mr. Niklas Hedman as the Head of the Commission's Research Services of the Committee. We are convinced that the skills and availability that he has shown within COPUOS will be a major advantage in his new functions.

Mr. Chairman, once again, the earthquake of 27 May brought widespread disaster to Indonesia with this natural disaster and the French delegation would like to join other delegations in expressing its condolences to this country for its distress, to its Government and people. And, if necessary, this dramatic event, once again, highlights the interest and need for international solidarity. I would repeat that this dramatic event points to the International Charter on Major Disasters and Space, was put into place, at the initiative of the German Civil Protection Defence System and was implemented with the services under the responsibility of France that very week when the disaster occurred. LANDSAT, DMC, IRS, RADARSAT and SPOT satellite data were all furnished to the users that needed and data from ALOS satellite was also provided by JAXA.

Since 2006, it is the eleventh time that the Charter has been activated and it is the one hundred and second time that it has been activated since it was created.

In the area of prevention of major risks, France also applauds implementation of the Aqua-Train Programme, also known as the A-Train. This flying in formation of two new satellites, CLOUDSAT and CLAIPSO, which were put into orbit successfully in April 2006 from Vandenberg in California with the Delta-2 launch vehicle.

The French-American mission called CALIPSO, which stands for Cloud Aerosol Lidar and Infrared Pathfinder Satellite Observations, is a mission I would like to turn to now. It uses the Proteus French platform and uses Lidar retrofusion (retro-diffusion?), the main instrument which is equipped with a telescope of one metre and a visible range camera as well as an infrared imaging device supplied by France. These two missions will, for the first time, supply 3-D views of clouds and aerosols in our atmosphere and will help us to answer the questions that we have with regard to how these clouds and aerosols impact the production of water, impact the climate and air quality.

And finally, Mr. Chairman, my delegation would also like to convey information about the American-European Agreement that was just concluded with regard to the observation of oceans.

Four bodies, including CNES for France, the National Centre for Space Studies, the European Organization for the Use of Meteorological Satellites, EUMETSAT, as well as NASA and NOAA for the United States. These four bodies are involved in the Agreement. The Agreement involves a new generation satellite called JASON-2 which will be used for the study of ocean movements and its impact on climate change. CNES and NASA will be overseeing the overall implementation, whereas EUMETSAT and NOAA will be responsible for data processing and dissemination of the data towards end-users. JASON-2 is scheduled to be launched in 2008.

Mr. Chairman, France applauds the excellent results obtained during the work of the forty-third session of the Scientific and Technical Subcommittee and the forty-fifth session of the Legal Subcommittee.

Turning first to the issue of space debris, the consensus obtained with regard to space debris should lead to significant progress with regard to limiting debris in space and this is an incitement and motivation for all States to apply it on a voluntary basis and to apply to recommendations that we hope we will be able to see the effects of in the coming years and we believe that this is truly a crucial issue.

With regard to the use of nuclear power sources in space, we were encouraged by the results of the joint Workshop held between the IAEA and our Organization and we are also encouraged by the very helpful conclusions of the work. Indeed, the way they worked together and how they planned to work together is something that still needs to be finalized. But regardless of the solution which is retained, our delegation is convinced that cooperation will lead to the development of rules to provide for technical safety for the use of nuclear energy in space and that this will benefit all mankind.

With regard to a coordination unit for space services for disaster management, my delegation applauds the Group of Experts for their remarkable work which was done at the request of the Subcommittee and which made it possible to develop a broader vision of the objectives and missions of this entity. We took note of the proposal of a number of countries to welcome the coordination unit and we would like to thank them. However, at this point, we are not in a position to be able to commit to this project

and we believe that attachment of this entity to the Office for Outer Space Affairs would be inappropriate. Positioning within already existing entities such as UNOSAT or the Office of Coordination of Humanitarian Affairs or another such agency might be more appropriate, in our view.

With regard to tele-medicine, our delegation would like to applaud the significant results obtained in terms of harmonizing practices in the area of registering space objects.

Mr. Chairman, by way of conclusion, I would like to discuss the issue of strengthening space education and communicate France's participation in the American programme called GLOBE.

The Programme is aimed at raising awareness amongst younger generations about the use of space technologies and new technologies, particularly with regard to dealing with environmental issues using *in situ* or in-field experiences. Students take measurements in the environment and send them via the Internet to a central node in NOAA which them makes them available to everyone through the intermediary of the GLOBE network. Significant concerns with regard to climate change and the environment underscore the need for working together and concerted action. GLOBE makes it possible to raise awareness amongst young people with regard to high-tech projects and gives them motivation to analyze the data and cooperate with scientists in order to use the computers and computer technology in this regard. Clearly, it is important to empower them in this regard.

Since 2004, France has been a partner, by way of a pilot project, to study the atmosphere and works with CALIPSO, the Franco-American satellite I mentioned earlier. The project is called CALSPHAIR and the French delegation would like to underscore the success of this programme which is now truly international since it involves 107 countries, 15,000 schools and has trained 25,000 teachers, all the while promoting regionalization. In Europe, for example, GLOBE EUROPE has led to new programmes in a number of developing countries.

Mr. Chairman, by way of conclusion, I would like to say that the Permanent Representative of France unfortunately does not have a Heurige available. However, I would be very pleased to welcome the heads of delegation to a reception at my residence on 14 June next.

Thank you.

The CHAIRMAN *(interpretation from French)*: Thank you Mr. Ambassador and thank you for your information with regard to France's involvement in space. Although I am supposed to know about all these activities in France, I still do learn something when I listen to your statement. For example, the fact that France had joined the GLOBE Programme which is something which we have been talking about for some years now, was news to me and I think it is excellent. And, of course, thank you on behalf of all the delegations at this Committee for your very kind invitation to the reception on 14 June.

We will now continue with the statements on item 5 of the agenda, General Exchange of Views, and the Republic of Korea now has the floor. Mr. Kim has the floor.

Mr. C.-H. KIM (Republic of Korea): Thank you Mr. Chairman. Mr. Chairman, at the outset, my delegation wishes to express its warm congratulations you on your election as Chair of the forty-ninth session of the Committee. I have every confidence that under your expertise and leadership, this meeting will indeed bring about fruitful results.

My delegation takes this opportunity to express its gratitude to Mr. Sergio Camacho, Director of the Office for Outer Space Affairs and his able staff for all their hard work in preparing for this session.

My delegation would also like to join the previous delegations in conveying its deepest condolences and sympathies to the Government and people of Indonesia for the tragic loss of life suffered as a result of the recent natural disaster.

The natural disasters make us realize again the relevance and importance of our work in this meeting. In this regard, we note with satisfaction that this session of the Committee, as well as its Subcommittees, have been exploring the possibility of strengthening the application of space technologies for disaster management.

Mr. Chairman, next year we have the fiftieth session of COPUOS. As the central international policy-making body in this field, COPUOS, for the half century, has made significant efforts and contributions to maintaining outer space for peaceful purposes, thereby promoting the utilization of space science and technology for economic, social and cultural development. My delegation believes that the Committee will contribute its current leading role.

Today, space science and technology has a greater role than ever before due to its expanded application in promoting sustainable development contributing to the fulfilment of the Millennium Development Goals, in particular, through remote sensing, GNSS, tele-medicine and space-system-based disaster management. In this connection, my delegation welcomes the Committee's continuing discussion on the implementation of the recommendations of UNISPACE III.

Mr. Chairman, let me now return to the space-related events that have taken place or that have been planned in Korea.

Following the success of the launch and operation of the Korean Multipurpose Satellite, KOMPSAT-1, in 1999, the Korean Government plans to launch the second Multipurpose Satellite, the KOMSAT-2, next month. The KOMPSAT-2's main mission is to collect panchromatic and multi-spectral high-resolution images of the Earth. My Government also began the KOMPSAT-3 Programme in August 2004 which is projected to launch in 2009. Meanwhile, the Communication, Ocean and Meteorological Geostationary Satellite, COMS, Programme, which started last year, continues to progress towards launch in 2008. The preparation for the launch of the second Science and Technology Satellite, STSAT-2, a 100 kilogram class low-Earth orbit satellite, by a Korea Space Launch Vehicle from the domestic space centre in Korea in 2007 is well on the way.

With the development of these satellite systems, Korea will be better prepared to execute environmental, agricultural and ocean monitoring as well as preservation of marine resources around the Korean Peninsula and East Asia. The capabilities of the satellites will make possible preparedness for and effective responses to special weather conditions such as typhoons, floods, yellow sandstorms and red tide and will enable monitoring of long-term changes of sea surface temperature and cloud patterns. I am confident that there will be much room for Korea's contribution to the international efforts in this field.

Along with technological development, Korea has continued its efforts to establish an institutional environment conducive to stable technological development under the international legal framework.

The Republic of Korea, as a member of the Outer Space Treaty, the Rescue Agreement, the Liability Convention and the Registration Convention, enacted the national space law and its regulations in November 2005. With the adoption of the national space law, Korea will be better able to implement the United Nations space treaties and coordinate and promote the space activities of both governmental and non-governmental entities.

To enhance awareness on space-related issues, in particular among young students, the Korean Government and its Local Government where the Korea Space Centre is located, have been holding various events leading up to the launch of KOMPSAT-2 and STSAT-2, including its first Space Week event in September last year. On the occasion of the Space Week, the Ministry of Science and Technology, the Korea Aerospace Research Institute and other bodies such as Young Astronauts Korea organized many events, including the National Model Rocket Contest, space exhibitions and the so-called "Name-on-a-Chip to Space Event" where the names of 120,000 people were inscribed on the chips which will be loaded onto the KOMPSAT-2. The whole events inspired more than 30,000 participants in the Space Week event and demonstrated a greater interest in and awareness of space science and technology.

In concluding, Mr. Chairman, I would like to assure you of my delegation's full cooperation to bring about a successful and meaningful session.

Thank you Mr. Chairman.

The CHAIRMAN *(interpretation from French)*: Thank you very much Sir for your statement. Thank you too for the details that you have given us of Korea's space activities which are developing in a remarkable way, especially given that your satellite launch is imminent. And it goes without saying that we wish you every success with that launch. I should also like to congratulate you on organizing the Space Week which seems to have been very successful with the people of Korea.

I now turn my attention to the Libyan delegation and I will give the floor to Dr. Elhadi Gashut. You have the floor Sir.

Mr. E. M. GASHUT (Libyan Arab Jamahiriya) *(interpretation from Arabic)*: Thank you very much Chairman, distinguished delegates. I should like to start by thanking you for this opportunity to speak on behalf of my country. It is a personal pleasure for me, Sir, to congratulate you upon your election to the chairmanship of this Committee. And I am anxious, Sir, to tell you of the great esteem which we hold you, given your eminent scientific and administrative past, and this will have a very clear and

significant impact on the work of this Committee without any doubt as you work in cooperation with the Office for Outer Space Affairs under the distinguished leadership of Mr. Sergio Camacho-Lara and his staff.

Chairman, we are often struck with admiration at the efforts made by States in the area of space exploration and with regards to the structure set up to accomplish such exploration. We note this, given the facts of what is going on, and also given scientific conferences and congresses held _____(?) as a result of the meetings of this Committee and its Subcommittees. Of course, the one and only aim is for space technology to be used to the benefit of humankind, to reinforce security and to improve current living standards and future quality of life.

Despite all the progress, however, which is a feature of today's world, today's world is powerless, given environmental challenges that we often note, especially when it comes to developing or least developed countries. I am thinking of the most recent earthquake to have struck Indonesia and this is the opportunity for me to convey my condolences to the Indonesian people and Government, given the very large number of victims of that tragedy.

This is, therefore, a call to all of us as civilized members of society to cooperate in this area and we should not take into account any other considerations which might constitute a hindrance to such cooperation. Our aim must be to make sure that this Committee is able to achieve its noble objects. And we must make sure that space becomes a common instrument for all humankind without any discrimination.

Which leads me to say, Chairman, that, as with other developing countries, my country is making every effort to use space technology for the benefit of development and is seeking to serve the efforts of humankind with all the plans and programmes that we have by way of promoting our development and to reduce the gulf between us and pioneer countries in the area of space activities. We are, therefore, anxious to support and implement the UNISPACE III recommendations in cooperation with United Nations bodies by way of promoting the projects in the area of sustainable development and we are seeking to resolve environmental problems in our part of the world. I am thinking of drought, desertification and so on, and also the declining water resources in our part of the world. We are making every effort, whether it be intellectual or material to resolve such problems. And we wish to bring space technology to bear on these issues.

And we have also made sure that space information is available. We have done this by setting up a satellite image station in order to survey issues such as environmental degradation, desertification, agriculture, arable crops and so on and we are looking into other ways of promoting this kind of technology to the benefit of our region and Africa as a whole.

In addition to events organized by Libya in recent times, I would like to underline the fact that we have hosted some 10,000 professionals and amateurs to witness the total eclipse of the Sun recently, which was visible from Libya. We have also provided services and facilities to make sure that space scientists and amateurs were able to take part in this event in good time. We have also organized a World Congress, namely Solar Physics and Energy. And in this context, we hosted some 100 scientists this year, in March, in Libya, and this took place alongside at the same time as the eclipse of the Sun. In fact, this was the longest eclipse of the Sun in the world which was very visible from one particular region of Libya in particular. A large number of scientists and researchers from various world space agencies and universities and so on came to Libya and particularly from 11 countries. And there were also representatives of various international bodies and associations.

This is in the context of advanced experiments which are being carried out and here the participation of specialists from my country has been vital. We have obtained new and remarkable results in the area of heliophysics as a result of such experiments. This is particularly important for astronomy, as studied throughout the world.

I also would like to draw your attention to another natural problem that affects a number of countries, namely desertification, the advance of the deserts in the world. This is a real natural disaster and a potential tragic disaster which is having effects as disastrous as earthquakes and tsunamis. Every effort must, therefore, be made in terms of scientific progress and material progress to make sure that we deal with this issue. We need to have this as an agenda item, therefore, by way of putting countries that suffer from desertification to limit the effects thereof. This needs to take place, taking into account the application of UNISPACE III recommendations.

Might I wish you every success at the helm of this Commission. Thank you.

The CHAIRMAN *(interpretation from French)*: I should like to thank you very much, Dr., for your statement on behalf of Libya and for the detail

which you have given us of the development of your activities in this area. Everybody is aware of the fact that Libya has been a member of this Committee only as of last year and we are, therefore, delighted to be in a position to benefit from your contribution now. In addition, might I say that Libya was, indeed, the host of a large number of people during the solar eclipse at the end of March last and I am delighted to say that I was also invited, although professional commitments prevented me from actually going to Libya to witness the eclipse of the Sun. However, I would like to congratulate you on the great success of that organization, given what was indeed one of the longest eclipses of the century. Thank you very much therefore for your statement.

I see no further speakers on my speakers list under agenda item 5 of the agenda.

Unless I see further requests for the floor on item 5, we will pursue and perhaps conclude our examination of item 5 of the agenda, that is, General Exchange of Views, this afternoon.

Ways and means of maintaining outer space for peaceful purposes (agenda item 6)

We now turn our attention to agenda item 6, Ways and Means of Maintaining Outer Space for Peaceful Purposes.

I do not currently have any speakers on my list of speakers for item 6.

Do I see any requests from delegations to take the floor under agenda item 6?

I see no such requests currently. We will, therefore, take up our examination of item 6 this afternoon.

Implementation of the recommendations of UNISPACE III (agenda item 7)

And we will turn our attention to item 7, namely, Implementation of the Recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space, otherwise known, to the vast majority of us, as UNISPACE III.

Under this agenda item, I have one speaker on my list, namely the Japanese delegation, and I, therefore, without further ado, give the floor to Mr. Shoichiro Sakaguchi to make a statement under agenda item 7. You have the floor Sir.

Mr. S. SAKAGUCHI (Japan): Thank you very much. Mr. Chairman, distinguished delegates, on behalf of the Japanese delegation, I am very honoured to present Japan's activities with regard to the implementation of UNISPACE III recommendations.

Mr. Chairman, Japan has actively participated in and contributed to the efforts of several Action Teams that were established to ensure the implementation of the Vienna Declaration, UNISPACE III recommendations, adopted in 1999.

In particular, Japan served as the Chair of Action Team No. 17, enacted to "Enhance Capacity-Building by Developing Human and Budgetary Resources". As you will recall, Japan presented the Team's final report at the forty-first session of the Scientific and Technical Subcommittee.

Last October, on the occasion of the Asia-Pacific Regional Space Agency Forum, APRSAF, in Kitakyushu City, Japan, Japan held a public outreach programme as an activity of the APRSAF Space Education and Awareness Working Group. The Working Group, in particular, stressed the importance of continuing efforts that increase awareness among the public, especially the youth and decision-makers, of the role that space science and technology and their applications play in promoting sustainable development. One of such efforts resulted in the organization of the first APRSAF water rocket competition for young people. This year, in addition to the water rocket event, we will also organize an APRSAF poster contest. The APRSAF Space Education and Awareness Working Group continues to explore various ways in which we could contribute to the enhancement of education for young people through space activities and the use of space-related materials to stimulate their interest in space technology and other related subjects. In this regard, this year on 4 March, Japan organized the Space Education Forum in Hanoi, Viet Nam, together with UNESCO, with the participation of school students.

Japan carries out such activities to increase public awareness of the importance of space activities and makes every effort to cultivate the potential of young people to broaden their minds and offer them insights with a view to developing human resources that will not only support future space activities but also ensure a better future for our society.

As for the Japan Exploration Space Agency, JAXA, the Agency has again demonstrated its dedication to promoting space education and human

resources training in the field of Earth observation by conducting pilot projects with the authorities in Thailand and Indonesia. In addition, JAXA, in cooperation with the Asia Institute of Technology and the Japan International Cooperation Agency, JICA, has implemented a training programme on Earth observation data analyzing technology. More than a thousand specialists from 40 countries, including Asia-Pacific, Africa, Middle East, Latin America and the Caribbean region, have completed the programme and we believe they are playing a significant role in the field of space applications.

Mr. Chairman, I would now like to turn to Japan's recent activities which have contributed to implementing the recommendations of the Action Teams in which Japan has participated.

Japan has contributed towards carrying out the 10-year Implementation Plan with regard to "Development of a Comprehensive, Worldwide Environmental Monitoring Strategy", and as a member of the GEO Executive Committee. In order to expand satellite remote sensing activities in the Asian region, APRSAF has been active in information exchange and has made specific proposals to promote cooperation activities in the field of space technology. Detailed activities on Earth observation will be introduced under agenda item 7.

Mr. Chairman, regarding "Improvement of Universal Access to and Compatibility of Space-Based Navigation and Positioning Systems", called Global Navigation Satellite Systems, GNSS, Japan has declared its intention to participate as a member or observer for the International Committee on Global Navigation Satellite Systems.

Furthermore, Japan is developing the Quasi-Zenith Satellite System, QZSS. The QZSS consists of several satellites with highly inclined orbits and geosynchronous periods. At any given moment, at least one of the QZSS satellites will be located over Japan. Unlike geostationary satellites, QZSS can transmit signals free from urban or mountain area obstructions because at least one of the three satellites remains overhead at all times. In addition, the system, used together with a Global Positioning System, GPS, will provide more accurate positioning information. Research on the Positioning Experiment System is expected to improve benefits for GPS users and promote more sophisticate uses for an advanced future satellite positioning system.

In addition, upon establishing a back-up system consisting of two MTSAT satellites, we will provide a GPS performance augmentation, namely MTSAT Satellite-Based Augmentation Systems, MSAS, services covering civil aviation. The Satellite-Based Augmentation Systems, SBAS, such as the Wide Area Augmentation System, WAAS, operated by the United States, the European Geostationary Navigation Overlay Service, operated by Europe, and MSAS are interoperable and can access by an aircraft equipped with the same equipment. By increasing interoperability and improving the system's performance, we hope to provide global, seamless and high-quality services.

Mr. Chairman, regarding "Implementation of an Integrated Global System to Manage Natural Disaster Mitigation, Relief and Prevention Efforts", Japan has responded by organizing the Sentinel-Asia project. Japan will advance with the project with the view to further expanding it in this region. The detailed activities for space-system-based disaster management support will be given under agenda item 12.

Concerning the "Management of the Earth's Natural Resources, Enhanced Weather and Climate Forecasting and Near-Earth Objects", Japan will continue to support the implementation of the Vienna Declaration, to the extent permitted by our limited resources.

Japan is of the view that the recommendations of UNISPACE III can be firmly implemented by complementing our activities with other Asian countries through APRSAF and by strengthening relations between APRSAF and international frameworks such as UN/RESAP and UN/ISDR.

Thank you very much for your attention.

The CHAIRMAN *(interpretation from French)*: Thank you very much Sir for your statement which was very thorough and gives us a clear picture of what Japan is undertaking by way of implementing the UNISPACE III recommendations. In addition, I think we are going to take up on the Sentinel Technical Presentation, given that I have no other requests for the floor under agenda item 7.

Technical presentation

I see no such requests and we will, therefore, without further ado, move on to the technical presentation which is designed to round off our meeting this morning. And I should like to give the floor, therefore, to Mr. Kaku of the Japanese delegation who is going to present he Sentinel Asia Project. This

is designed to set up a support system for the management of disasters in the Asia-Pacific region.

Sir, you have the floor.

Mr. K. KAKU (Japan): Mr. Chairman and distinguished delegates, it is a great honour for me to have an opportunity to present about our Sentinel-Asia project.

I will explain about what is Sentinel-Asia, its background, philosophy and framework and main activities and how it works. And also I present what is expected of you and future evolution after Sentinel-Asia and summary.

First, I will explain about its background, philosophy and framework.

The Asia-Pacific Regional Space Agency Forum, APRSAF, was established in 1993 to enhance the development of space programs in the Asia-Pacific region and promote regional cooperation in the fields of space technology and its applications, with participation of space agencies, related governments, regional and international organizations and institutions.

Now around 100 organizations are joining as members.

APRSAF has four Working Groups like this and it has annual meetings and the next thirteenth session is planned to be held in Jakarta from 22 to 24 November of this year, in cooperation with Indonesia.

After many discussions in APRSAF about the space communities' contributions to effective disaster reduction in the Asia-Pacific region, the twelfth APRSAF Conference held at Kitakyushu, Japan, last October, approved to initiate the pilot projects as _____(?) for establishment over disaster management system. And the Firs Joint Project Team Meeting was held last February in Hanoi, Viet Nam, in cooperation with Vietnamese Academy of Science and Technology and the UNESCAP and discussed the implementation plan and the membership.

The Second Joint Project Team Meeting is planned to be held in June, this month, from 27 to 28, in Bangkok, Thailand, in cooperation with the Geo-Informatics and Space Technology Department Agency, GISTDA, and UNESCAP.

Our philosophy is for the space community should contribute to disaster management in the Asia-Pacific region and its approach is stepwise. The first step is the utilization of Earth observation satellite data for disaster management and construction of disaster information-sharing platform. And Step One is called "Sentinel-Asia". Sentinel-Asia is carried out from this year to next year. A two-year project. And in Step Two, a satellite communications system will be incorporated into Sentinel-Asia. Step Three will be a comprehensive disaster management support system.

Our activities are based on best-effort and voluntary-based, voluntary initiatives by participating organizations.

Sentinel-Asia consists of whole communities and international cooperation and the leadership by the international community, a space community provides satellite image and remote sensing technology. And digital Earth and Web-GIS geographical information system with the GIS community provides an information-sharing platform and basic data like map data. And the disaster reduction community is the user for us(?).

The Joint Project Team consists of 27 organizations from whole(?) communities. The Joint Project Team is open to all the APRSAF member countries, disaster prevention organizations and regional and international organizations who wish to participate in disaster information sharing activities. And JAXA established two project offices in Tokyo and Bangkok, Thailand.

Cooperation with the disaster reduction community is essential for Sentinel-Asia. The Asian Disaster Reduction Centre, ADRC, was established in 1998 in Kuru(?), Japan. It promotes multi-national cooperation for disaster reduction in the Asian region. Now it has 25 member countries, five advisor countries and one observer. Its major activities are information exchange among disaster experts, human resources development and building and strengthen communities capabilities for disaster.

Next, I will explain about the main activities. The main activities, one is emergency observation in case of major disasters. JAXA, which provides _____(?) observing satellite, ALOS data for Central Asia. And we welcome other satellites to join us.

And for these emergency activities, it is very important to archive the data at this time as much as possible because through _____ disaster area, it is very difficult to compare the related data, before and

after the disaster. I will show you some of the examples later.

And also our activities, ALOS accepts observation requests from ADRC members.

Besides emergency activities, we going to do routine activities forecasting on a specific disaster like wild fire and flood. And in parallel to these activities, we think capacity-building fro utilization of satellite image for disaster management is very important.

The actual operations will start in October this year when ALOS data operations start.

This chart shows overall flow of Sentinel-Asia. There our examination system on the _____(?) side and the Disaster Management Agency the right side. Both sides are bulleted by the information-sharing platform and capacity-building activities.

Concerning the information-sharing platform, I will explain later.

JAXA accepts ALOS observation requests from ADRC member countries through ADRC.

Agencies also join the international framework, the so-called International Charter.

This is a plan for wildfire monitoring using MODIS data. MODIS is a sensor onboard a NASA(?) satellite, Aqua and TERRE.

Concerning wildfire monitoring, there are already some regional activities. Sentinel-Asia will collect them and fill the open area to cover all the Asia areas, including Siberia. Details will be discussed in the next Joint Meeting.

ALOS(?) was launched in January this year and we have already completed its initial check-outs(?). Now the calibration and validation commissioned sensors are being performed.

After that, regular operations will start from October this year. After ALOS(?) was launched this January, unfortunately we had some disasters in Asia and ALOS observed them.

This is the landslide in Leyte Island, Philippines, last February. The landslide area is marked by little dots and this area is extracted by comparison of the data before and after the disaster.

This the Mount Merapi Volcano eruption in Indonesia observed last May, last month.

This is the flood area in Thailand observed last May. The flooded area is marked blue. They are extracted by comparison with old data which hold flood, before the flood.

This is very recent. Misfortune struck Yogyakarta, Indonesia. A heavily stricken area is shown by the red circle. This is also extracted by comparison of before and after image.

And next I will explain how it works about the information-sharing platform. On the information-sharing, we use Digital Asia. Digital Asia is an Internet-based web geographical information system Web-GIS. We can see satellite images data all valid on map with disaster-related information on the Internet. Also we can easily upload the data by putting them on the Digital Asia server based on OGC Interface. OGC stands for Open GIS Consortion(?). This is a very standard interface in this field.

Digital Asia is promoted by Keio University in Japan in cooperation with these many organizations. Digital Asia treats various kinds of data like natural and social data on the Internet in order to make strategic planning on risk management in Asia. Those data consist of core data kept in Keio University and externally distributed data in these organizations in Asia. All the data are managed at the Digital Asia server in Keio University and processed _____(?) to the Internet user. Briefly speaking, Sentinel-Asia is application of Digital Asia for the disaster reduction objectives.

A characteristic of this system is overlay processing and you can see the map and satellite image on the social and economic data stored in each organization. These data are retrieved and we can see overlay _____(?).

This chart also shows the overlay processing distributed data in which each organization can be seen as overlaid image by the use through the Internet.

This is a Japan sample image of Digital Asia. This is the North Sumatra area observed by LANDSAT satellite before and after the earthquake.

This is another sample image of landslide hazard information in Gifu Prefixture(?) in Japan. Data is shown and overlaid on digital map data.

And the next I will present about is what is expected of you.

Sentinel-Asia needs foreign data for disaster management, disaster information including on-site digital camera images. This is mainly gathered by the Asian Disaster Reduction Centre, ADRC, through its network, composed of its member countries and posted(?) in Central Asia. And also we need satellite images from space organizations and agencies. And fine digital maps from geography organizations. And Digital Asia is equipped with very rough digital maps of the fault(?) which covers all of Asia. However, if possible, a fine digital map is useful for us.

Also we need regional social and economic data, such as sensor data.

Next our future evolution, after Sentinel-Asia. Sentinel-Asia is just a two-year project over this year and next year. After that, Step Two will start. Of course, are incorporating Sentinel-Asia.

This shows JAXA's vision and here all kinds of satellites should be utilized for disaster management. JAXA will study future plans through discussions on the results of Sentinel Asia.

And finally a summary. Here is a summary of my presentation.

First, the Sentinel-Asia project was initiated based on best-efforts and voluntary initiative.

On the second, main activities, listed here, and operation will start in October this year.

And third, we use Digital Asia as an information-sharing platform.

And fourth, contents and data is wanted.

Thank you very much. And if you have anything to ask, please contact us. Thank you.

The CHAIRMAN *(interpretation from French)*: Thank you Mr. Kaku for that very comprehensive presentation of the Sentinel-Asia project which gives us a good vision of Japan's work with its partners in the Asia-Pacific region and its endeavours to improve the use of space techniques to prevent and manage natural disasters and provide support in the event of a natural disaster.

I see that the representative of Australia has asked for the floor.

Ms. N. ROSENBLUM (Australia): I would first like to make a few brief remarks about Japan's very interesting presentation on the Sentinel-Asia project. But first, let me congratulate you and your colleagues on election to office.

`And, Mr. Chairman, Australia would also like to join with the other delegations in expressing our sympathy and condolences to Indonesia following the devastating natural disaster which has caused so much suffering in their country. We would like to extend our deepest sympathies, particularly to the families of the victims of the Yogyakarta earthquake.

Australia is committed to working with Indonesia in its relief efforts. Our disaster experts are working closely on the ground with Indonesian counterparts and Australia has committed 7.5 million Australian dollars to the relief effort.

Mr. Chairman, I would like to thank Japan for its presentation on the Sentinel-Asia project. Australia would like to acknowledge Japan's substantial work and funding to progress this project. We would like to acknowledge Japan's contribution of satellite-derived information related to disasters towards this project.

Mr. Chairman, Australia welcomes the Sentinel-Asia project as a good example of regional cooperation and as a complementary regional project that supports other international efforts to provide timely satellite information about disasters, such as the Group on Earth Observations and the work of this Committee.

Mr. Chairman, Australia has participated in the development of this concept since 2004, through our participation in the Asia-Pacific Space Agency Forum. As the Sentinel-Asia project is a larger multiple-hazard expansion of the Sentinel Hot Spots project which was used for bush fire detection and tracking in Australia. Australia has been able to provide advice to the Asia-Pacific Space Agency Forum on practical use of this system.

Mr. Chairman, Australia would like to thank Japan for its presentations and its contributions and we look forward to further participation in the Sentinel-Asia project in the future.

Thank you.

The CHAIRMAN *(interpretation from French)*: Thank you to the delegation of Australia for that statement and for your support to the Sentinel-Asia

presentation of Japan. I know, I have quite a few friends in Australia actually and I know that, indeed, they have participated since the very beginning in this project. So congratulations to you and for your statement on this specific subject.

Would any other delegations like to take the floor to ask questions about the technical presentation by our Japanese colleagues, the Sentinel-Asia project?

I see none but I have a question. I have a question for you, for our Japanese colleague. In the whole Sentinel-Asia project, you did not, when you were explaining it, discuss the contribution of meteorological satellites, and we know that many natural disasters, especially floods or flood-related type disasters or forest fires, that these kinds of disasters are related to climate or meteorological events. Does the Sentinel-Asia project take into account the meteorological input and the input from the meteorological satellites? Thank you.

Mr. K. KAKU (Japan): Mr. Chairman, I understand that is a matter to be considered from now and so far it is not included in this process.

The CHAIRMAN *(interpretation from French)*: Thank you for that answer but in the future development of the Sentinel-Asia project, in your presentation, it does indicate that other space systems are planned, a telecommunications system, that is for fixed and mobile telephony and other types of technology. So it makes sense that meteorological technology would also be involved in that evolution in the future. Is that right?

Thank you for your information.

A question from Nigeria.

Mr. A. A. ABIODUN (Nigeria): Thank you very much Mr. Chairman. I am interested in knowing whether there is a relationship between the work that has been presented here from Japan and the earlier initiatives by the Association of Japanese Aerospace Companies in the early 1990s or in _____(?) and widows(?), within the concept of more less a constellation of satellites dedicated to monitoring disasters and whether they are playing any role in this work.

The CHAIRMAN *(interpretation from French)*: Thank you Dr. Abiodun for your question. I will now convey it to our colleague from Japan. Mr. Kaku, would you like to answer.

Mr. K. KAKU (Japan): About the satellite system after else(?) now we are studying what system would be useful for disaster monitoring.

The CHAIRMAN: Dr. Abiodun, does this answer your question?

(Continued in French) Are there any other questions for our Japanese colleague on the subject of the Sentinel-Asia project? Yes? I have a question from our distinguished colleague of Mongolia. You have the floor.

Mr. K. DAVAADORJ (Mongolia): Thank you Mr. Chairman. First of all, I would like to express my gratitude for the very interesting presentation made by the Japanese delegation.

I would like also on behalf of my delegation to congratulate you as well as the Vice-Chairmen of the Committee on how they have been elected to these posts and the Mongolian delegation is confident that under your wise guidance and leadership the Committee reach more progress in the field of the peaceful use of space.

We are also joining the previous delegations in expressing our condolences and deep sympathy to the people and Government of Indonesia which was recently hit by the disastrous earthquake that had caused a great loss in _____(?) *(not clear)*. This earthquake, as well as the tsunami and other natural disasters we have been facing recently highlights the importance of science technology and its application in the reduction of such kinds of disasters, as well as their prevention.

In this regard, Mongolia considers that the project on establishing the disaster management support system in the Asia and Pacific proposed by the Japanese delegation is very important and urgent.

Mongolia is a member of the Asia-Pacific Regional Space Agency Forum and expresses its full support the Sentinel-Asia project and believes that the implementation of this project will bring a practical contribution to the creation of a comprehensive system of prevention and disaster management.

Thank you Mr. Chairman.

The CHAIRMAN *(interpretation from French)*: Thank you to the delegation of Mongolia for that statement and for the congratulations conveyed to members of the Bureau.

Would anyone else like to take the floor at this time?

I see no one else wishing to take the floor on the subject of this technical presentation. So I would like to once again thank Mr. Kaku for his very comprehensive presentation.

We will now be adjourning the session of this morning in just a few moments but before we adjourn I would like to inform you of our work programme for this afternoon.

We will resume at 3.00 p.m. exactly and we will return and, no doubt, conclude item 5 of the agenda, General Exchange of Views, and we will also examine item 6, Ways and Means of Maintaining Outer Space for Peaceful Purposes.

We will also look at 7, Implementation of the Recommendations of UNISPACE III.

And if time permits, we will begin item 8, report of the Scientific and Technical Subcommittee.

Are there any questions on the schedule and work programme for this afternoon?

I see none.

This session is hereby adjourned until this afternoon at 3.00 p.m.

Thank you.

The meeting adjourned at 12.24 p.m.